We claim:

1. A method for rendering a region of a composite glyph, comprising:

defining a composite glyph by a set of elements;

generating a set of two-dimensional distance fields using the set of elements, a composition of the set of two-dimensional distance fields representing the composite glyph; and

rendering a region of the composite glyph using the set of two-dimensional distance fields, the rendering further comprising:

determining, for each component of each pixel in the region, an antialiased intensity of the component of the pixel, the determining further comprising:

associating, for each distance field in the set of two-dimensional distance fields, a corresponding set of sample points with the component of the pixel;

determining, for each distance field in the set of two-dimensional distance fields, a corresponding distance using the corresponding set of sample points;

combining the corresponding distances to determine a combined distance; and

mapping the combined distance to the antialiased intensity of the component of the pixel.

2. The method of claim 1 wherein a particular element in the set of elements is a stroke.

3. The method of claim 1 wherein a particular element in the set of elements is an outline.

4. The method of claim 1 wherein a particular element in the set of elements is a radical.

5. The method of claim 1 wherein a particular element in the set of elements is a stroked radical.

6. The method of claim 1 wherein a particular element in the set of elements is a two-dimensional shape descriptor.

7. The method of claim 1 wherein a particular element in the set of elements is a one-dimensional shape descriptor.

8. The method of claim 1 wherein a particular element in the set of elements is a path.

9. The method of claim 1 wherein a particular element in the set of elements is a distance field.

10. The method of claim 1 wherein a particular element in the set of elements is a distance map.

11. The method of claim 1 wherein a particular element in the set of elements is an adaptively sampled distance field.

12. The method of claim 1 wherein a particular element in the set of elements is a procedure.

13. The method of claim 1 wherein a particular element in the set of elements is a distance function.

14. The method of claim 1 wherein a particular element in the set of elements is an implicit blend of a first shape descriptor and a second shape descriptor.

15. The method of claim 1 wherein a particular element in the set of elements is a skeletal descriptor with a corresponding offset descriptor.

16. The method of claim 1 wherein a particular element in the set of elements is drawn by a user.

17. The method of claim 1 wherein the defining is performed automatically by a procedure.

18. The method of claim 1 wherein the defining is performed by a user.

19. The method of claim 1 wherein the defining is performed semi-automatically by a procedure and a user.

20. The method of claim 1 wherein the defining further comprises:

determining a shape descriptor for a particular element in the set of elements; and

determining a distance function for the shape descriptor to define the particular element.

21. The method of claim 1 wherein the defining determines the set of elements from a distance field of a shape descriptor for the composite glyph.

22. The method of claim 1 wherein a particular two-dimensional distance field in the set of two-dimensional distance fields is an adaptively sampled distance field.

23. The method of claim 1 wherein a particular two-dimensional distance field in the set of two-dimensional distance fields comprises a set of distances stored in a memory.

24. The method of claim 1 wherein a particular two-dimensional distance field in the set of two-dimensional distance fields is represented by a procedure.

25. The method of claim 1 wherein the combining performs a maximum of the corresponding distances to determine the combined distance.

26. The method of claim 1 wherein the combining performs an arithmetic average of the corresponding distances to determine the combined distance.

27. The method of claim 1 wherein the combining performs a union of the corresponding distances to determine the combined distance.

28. The method of claim 1 wherein the combining performs an intersection of the corresponding distances to determine the combined distance.

29. The method of claim 1 wherein the combining performs a difference of the corresponding distances to determine the combined distance.

30. The method of claim 1 wherein the combining performs an implicit blend of the corresponding distances to determine the combined distance.

31. The method of claim 1 wherein the combining performs an arithmetic operation on the corresponding distances to determine the combined distance.

32. The method of claim 1 wherein the combining performs a conditional operation on the corresponding distances to determine the combined distance.

33. The method of claim 1 wherein the combining uses a procedure to determine the combined distance.

34. The method of claim 1 wherein the combining uses a table to determine the combined distance.

35. A method for rendering a region of a composite glyph, comprising:

defining a composite glyph by a set of elements;

generating a set of two-dimensional distance fields using the set of elements, a composition of the set of two-dimensional distance fields representing the composite glyph; and

rendering a region of the composite glyph using the set of two-dimensional distance fields.

36. The method of claim 35 wherein the rendering determines, for each component of each pixel in the region, an antialiased intensity of the component of the pixel.

37. The method of claim 36 wherein the determining of the antialiased intensity of the component of the pixel further comprises:

associating, for each distance field in the set of two-dimensional distance fields, a corresponding set of sample points with the component of the pixel;

determining, for each distance field in the set of two-dimensional distance fields, a corresponding distance using the corresponding set of sample points;

combining the corresponding distances to determine a combined distance; and

mapping the combined distance to the antialiased intensity of the component of the pixel.

38. The method of claim 35 wherein a particular element in the set of elements is a stroke.

39. The method of claim 35 wherein a particular element in the set of elements is an outline.

40. The method of claim 35 wherein a particular element in the set of elements is a radical.

41. The method of claim 35 wherein a particular element in the set of elements is a stroked radical.

42. The method of claim 35 wherein a particular element in the set of elements is a two-dimensional shape descriptor.

43. The method of claim 35 wherein a particular element in the set of elements is a one-dimensional shape descriptor.

44. The method of claim 35 wherein a particular element in the set of elements is a path.

45. The method of claim 35 wherein a particular element in the set of elements is a distance field.

46. The method of claim 35 wherein a particular element in the set of elements is a distance map.

47. The method of claim 35 wherein a particular element in the set of elements is an adaptively sampled distance field.

48. The method of claim 35 wherein a particular element in the set of elements is a procedure.

49. The method of claim 35 wherein a particular element in the set of elements is a distance function.

50. The method of claim 35 wherein a particular element in the set of elements is an implicit blend of a first shape descriptor and a second shape descriptor.

51. The method of claim 35 wherein a particular element in the set of elements is a skeletal descriptor with a corresponding offset descriptor.

52. The method of claim 35 wherein a particular element in the set of elements is drawn by a user.

53. The method of claim 35 wherein the defining is performed automatically by a procedure.

54. The method of claim 35 wherein the defining is performed by a user.

55. The method of claim 35 wherein the defining is performed semi-automatically by a procedure and a user.

56. The method of claim 35 wherein the defining further comprises:

determining a shape descriptor for a particular element in the set of elements; and

determining a distance function for the shape descriptor to define the particular element.

57. The method of claim 35 wherein the defining determines the set of elements from a distance field of a shape descriptor for the composite glyph.

58. The method of claim 35 wherein a particular two-dimensional distance field in the set of two-dimensional distance fields is an adaptively sampled distance field.

59. The method of claim 35 wherein a particular two-dimensional distance field in the set of two-dimensional distance fields comprises a set of distances stored in a memory.

60. The method of claim 35 wherein a particular two-dimensional distance field in the set of two-dimensional distance fields is represented by a procedure.

61. The method of claim 37 wherein the combining performs a maximum of the corresponding distances to determine the combined distance.

62. The method of claim 37 wherein the combining performs an arithmetic average of the corresponding distances to determine the combined distance.

63. The method of claim 37 wherein the combining performs a union of the corresponding distances to determine the combined distance.

64. The method of claim 37 wherein the combining performs an intersection of the corresponding distances to determine the combined distance.

65. The method of claim 37 wherein the combining performs a difference of the corresponding distances to determine the combined distance.

66. The method of claim 37 wherein the combining performs an implicit blend of the corresponding distances to determine the combined distance.

67. The method of claim 37 wherein the combining performs an arithmetic operation on the corresponding distances to determine the combined distance.

68. The method of claim 37 wherein the combining performs a conditional operation on the corresponding distances to determine the combined distance.

69. The method of claim 37 wherein the combining uses a procedure to determine the combined distance.

70. The method of claim 37 wherein the combining uses a table to determine the combined distance.